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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/789,163	02/20/2001	Shuichi Kikuchi	10417-057001	9160

7590 10/24/2002

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NEW YORK CITY OFFICE

EXAMINER

FOURSON III, GEORGE R

ART UNIT

PAPER NUMBER

2823

DATE MAILED: 10/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

1	2	3	4	5	6	7	8	9	10	11	12
[Faint text, possibly "Secretary"]											
[Faint text]											
[Faint text]											
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Response to OA	
Date	10-24-02
Date	01-24-03
Date	04-24-03
Date	fe

Office Action Summary	Applicati n No.		Applicant(s)	
	09/789,163		KIKUCHI ET AL.	
	Examiner		Art Unit	
	George Fourson		2823	

-- The MAILING DATE of this communication app ars on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 1-3 and 7-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-6 and 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

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Applicant's election without traverse of the invention of claims 4-6 and 11-13 in Paper No. 4 is acknowledged.

The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81. No new matter may be introduced in the required drawing.

Applicant is required to furnish a drawing depicting the regions formed in claims 11 and 12 if they are in addition to the regions formed in claim 4. See below in this regard.

Claims 4-6 and 11-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, the use of "predetermined" reads on a nebulous mental step conducted prior to the manipulative steps of the claimed invention, hence rendering the present process claims unclear in meaning and scope. If applicant wishes to patent detailed controls over the recited process, they must be positively recited. In claim 5, lines 5 and 6, it appears that - - the selective oxidation film- - should replace "an element isolation film". In claim 6, line 3, - - the - - should precede "process". In line 4, "a" should be deleted. It appears that claim 11 should read "...claim 4, further comprising a step..." because the portion "comprising the steps of: forming...said drain region" appears to recite steps previously recited but fails to employ proper antecedent basis for terms used and causes confusion as to whether the steps are additional steps to those of claim 4. In this regard, it is questioned whether the "drift region" is the "second conductive type of layer". The term "highly" in claim 11, line 12, is a relative term which renders the claim

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indefinite. The term "highly" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. If applicant intends a particular doping level it must be clearly recited. Also, there is no antecedent basis for "highly doped drain region". It is questioned what is recited through use of "vicinity of ". In claim 12; it is confusing to recite that the "first ion implanted layer" and the "second ion implanted layer" are of the same conductivity type in view of the instant specification and drawings. It appears that - - first - - should replace "second" in line 4 in conformance with claim 4. Applicant is required to ensure that all terms intended to recite the same element employ proper antecedent basis to make clear what steps are recited. Claim 12 appears to recite forming the regions of claim 4. Consistent terminology must be employed.

Claim 5 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. It appears that claim 5 merely labels regions formed in claim 4 and as such does not further limit the process of claim 4.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 4-6 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Kwon et al.

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Kwon et al discloses formation of implanted, and therefore necessarily diffused during activation, layer 14, oxidation resistant film 18, resist 20 on the substrate and on the oxidation resistant film, implantation of region 23 using 18 and 20 as a mask forming channel stopper 24, removal of 18 and 20 after selective oxidation using 18 as a mask to form field oxide 26, gate oxide growth using 26 as a mask, formation of source/drain 36 spaced from the gate 32 which ranges from the field oxide to the substrate and source/drain 34 adjacent the gate.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956. See MPEP 203.08.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner George Fourson whose telephone number is (703) 308-2544. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy, can be reached on (703) 308-4918. The fax number for this group is (703)308-7722 (or extensions 7724, 3431 or 3432) for regular communications and (703)308-7382 for after final communications.

George Fourson
Primary Examiner
Art Unit 2823

GFourson
October 21, 2002

Notic of Referenc s Cit d	Application/Control No. 09/789,163	Applicant(s)/Patent Under Reexamination KIKUCHI ET AL.	
	Examiner George Fourson	Art Unit 2823	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6,025,231	02-2000	Hutter et al.	438/268
	B	US-5,482,888	01-1996	Hsu et al.	438/286
	C	US-4,918,026	04-1990	Kosiak et al.	438/207
	D	US-5,578,514	11-1996	Kwon et al.	438/286
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.